entities – impacts agro-biodiversity.The project gathers 12 datasets from 10 socio-ecological contexts (societies/countries) collected by different specialists from distinct disciplines: anthropology, ecology, ethnobiology, geography ... Producing a meta-analysis from the database supposes that a common collection method was adopted. Since this is not the case, the composition of databases requires the use Knowledge Management, i.e. methodologies and tools enabling a formal representation of knowledge in order to identify, create, represent and distribute insights and experiences in an organization, e.g. NETSEED. Referring to the distinction between Data, Information and Knowledge, the NETSEED datasets must be supplemented by a description of the study protocols to establish a link between Data and Knowledge. The semantic associated with the information has to be considered in the construction of this link. The purpose of this presentation is to illustrate the semantic distances between case studies described during the project workshops.

Seed circulation networks in agrobiodiversity conservation: concepts, methods and challenges

Marco Pautasso

Abstract: The circulation of seed among farmers is key to agrobiodiversity conservation. Agrobiodiversity goes beyond the diversity of crop species, varieties and genes: it includes the variety of agrarian practices and landscapes, and is part of humanity's cultural heritage. Whilst agrobiodiversity conservation has received much attention from researchers and policy makers over the last decades, the role of seed circulation networks in preserving agrobiodiversity needs to be more investigated. This presentation provides a summary of key concepts, methods and challenges to better understand seed circulation networks. This improved understanding is worthwhile for its own sake, but is also essential to make possible the preservation and sustainable use of traditional crop varieties (landraces) across the world. Whilst there is a consensus that agrobiodiversity conservation and the health of ecosystems are interrelated, there is insufficient knowledge about the social and cultural dimension of environmental change in relation to seed circulation. For example, we know little about how seed circulation networks will cope with climate (e.g. precipitation) and socio-economic (e.g. family structures) changes. Methods available to study the role of seed circulation networks in the preservation of crop specific and genetic diversity range from meta-analysis to modelling and scenarios, from genetic to biogeographical studies, from anthropological and ethnographic research to the use of network analysis. We advocate a diversity of methodological approaches, so as to promote the creation of robust and policy-relevant knowledge. Outstanding challenges to make seed circulation networks work for biodiversity conservation in agro-ecosystems include: (i) the integration of ex situ and local approaches, (ii) interdisciplinary collaborations between social and natural scientists, and (iii) the use of networks as a conceptual framework able to bridge boundaries among researchers, farmers and policy makers, as well as the other various stakeholders.

Genetic resources sourcing strategies and behavior of scientists: results from an international survey on researchers' use and exchange practices

Eric W. Welch, Selim Louafi

Abstract: Adopted during the first International Congress of Ethnobiology (1988), the Belem Declaration acknowledged for the first time biologists' responsibility to better address the needs of indigenous and local populations and recommended compensating them for the utilization of their biological resources and knowledge. Since then, the Convention on Biological Diversity (1992) and its recently adopted

Nagoya Protocol on Access and Benefit Sharing (2010), along with the International Treaty of the FAO (2001), have generalized the principle of channeling returns—whether monetary or non-monetary—back to a range of designated groups, whether bilaterally or through collective means such as a benefit-sharing fund. These principles are implemented through a set of mechanisms such as prior informed consent or material transfer agreements that formalize the practices of access, exchange and use of genetic resources and associated knowledge. The current contribution aims to analyze the effect that these regulations have on scientists' behavior related to the acquisition and contribution of genetic resources for food and agriculture (GRFA). The paper explores in particular the connection between the importance of genetic diversity in scientists' research activities and GRFA sourcing strategies and behavior. The analysis goes beyond current research to examine institutional, economic, and attitudinal explanations for patterns in scientists' use of genebanks. It is based on a survey that covers GRFA exchange and use practices in two different countries (US and France) and four different types of organizations (university, national research institute, company, and government). The analysis covers individual as well as project level, such that it is possible to investigate some portion of the collaborative network of the scientists, their exchange behavior and the institutional context within which they conduct research. Findings will inform current understanding about access, exchange and use behavior of researchers. Conclusions will discuss implications for practice and policy.

What role do seed exchange networks play in recovering from a disaster? Evidence from Seed System Security Assessments

Shawn McGuire

Abstract: Emergency seed aid a common intervention in many developing countries. Typically, these interventions are in response to an acute crisis such as drought, flooding, or short-term conflict, and are based on the assumption that the crisis has restricted the availability of seed - or of biodiversity - to farmers. The aim of seed aid is thus to help farming communities recover from disaster, usually by supplying them with seed (direct seed distribution) or with the means to acquire seed (seed vouchers and fairs). However, seed aid has come under growing criticism, with evidence emerging over the past decade that seed aid can breed dependency, or otherwise cause harm to how seed systems function and cope with stress. Seed System Security Assessments (SSSAs) have helped shape this critique of seed aid, by analysing how farmers cope with stress and maintain seed security in countries affected by disaster, close to stress periods (e.g. Ethiopia, Kenya, Zimbabwe, Southern Sudan, Haiti). By focusing on seed sources farmers use across different crops, these SSSAs reveal the role networks (both local and market) in seed security, both for accessing desired crop varieties, and for maintaining (or re-building) agrobiodiversity. Though farmers' seed systems show considerable signs of resilience to stress, and the ability to maintain seed security and agrobiodiveristy without interventions, SSSAs also highlight where local seed networks face challenges, such as with access to innovations. We reflect on experience with SSSAs across multiple countries, and on their implications for understanding exchange networks, particularly in terms of the appropriate scale of analysis, and in relation to dynamic needs and farming systems.